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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,068	04/26/2002	Alvin Ronlan	PVZ-007US	7796
959	7590	03/23/2004	EXAMINER	
LAHIVE & COCKFIELD, LLP. 28 STATE STREET BOSTON, MA 02109			KNABLE, GEOFFREY L	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,068

Applicant(s)

RONLAN, ALVIN

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-33 and 35-41 is/are rejected.
- 7) ☒ Claim(s) 34 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-1-02
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____

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1. Claim 34 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim - note that claim 18 is (by virtue of claim 17) a multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim 34 has not been further treated on the merits.

However, it is also noted that claim 34 appears to arguably be an improper dependent claim insofar as it references the other claims to further define the solid bodies whereas these other claims are not directed solely to the solid bodies but rather are directed to a complete composition.

2. Claims 19, 20, 29, 30, 37, 38 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, line 4, the degrees symbol was omitted after "22".

Claim 30 raises an ambiguity as the weight ratio range cited therein contradicts the weight ratio range in claim 29 from which this claim depends, this rendering the scope of protection indefinite and confusing for both these claims. It seems that the intent may have been for claim 29 to define "2:1 to 1:3" but clarification is required (the claim will be interpreted as such for purposes of this office action as this seems to most reasonable way to reconcile these conflicting claims with each other and with the remainder of the disclosure). This same ambiguity is presented by claim 38 which contradicts the weight ratio range in claim 37.

Claim 41 defines that the "solid bodies are as defined as in claim 17" - claim 17 is however not directed to solid bodies but rather is directed to a tire balancing

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composition. While this composition may include solid bodies, presentation of claim 41, directed to a composition kit, as dependent upon a claim directed to a composition (not in kit form) raises an ambiguity in determining the scope of the claim.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-17, 22-31 and 35-41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kenney (US 4,304,281) alone or optionally (for the 103) further in view Bredbeck (US 5,522,559).

Kenney discloses a composition comprising a gel with solid bodies in the form of rubber crumb or sawdust. Further, the rubber crumb is at for example "10 mesh" which in light of the table in col. 9 would seem to have an average particle size well within the claimed range. This reference does not explicitly characterize the rubber particles in terms of "an average smallest dimension" - it however would seem reasonable to expect the described screening to in essence be an indication of the smallest particle dimension since the screening process would be expected to pass or retain material

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based in large part on the smallest dimension - particles with an average dimension within the claimed range are therefore considered to have been taught by the reference. Further, even if not considered to have been explicitly taught, the reference suggestion to use 10 mesh material, this having a described aperture of 1.70 mm, along with the apparent fact or desire that rubber crumb have uniform particle size (e.g. col. 1, lines 36-41 of Bredbeck), would have rendered it obvious to select uniform material around the 10 mesh aperture size and thus having average dimensions (both) well within the claimed range. The reference to a "tyre balancing composition" is not considered to define over the reference composition, it being noted in particular that the reference even contemplates a flow capability in the tire for the gel composition - note esp. col. 3, lines 24-31.

As to claims 14-16, as rubber crumb is a ground rubber product that would have been expected to be (or should be) normally and typically a generally uniform material (note also Bredbeck as described above), as well as the fact that these are described as "particles" and thus would not have been expected to be significantly elongated material, rubber crumb material having ratios less than 2, 1.5 or "around 1" as claimed are considered to have been implicit or obvious from the reference teachings. As to claim 17 (and 41), note again that 10 mesh seems well within the claimed 1-4mm range. As to claims 22-25, note col. 3, lines 20-23 (the reference range being equivalent to 800-1500 kg/m³ using applicant's units) - this is either fully within or overlaps with endpoints within the claimed ranges, this being considered sufficient to teach or certainly render obvious the values claimed. As to claim 26, again rubber is suggested.

As to claims 27-30 (and 35-38), the exemplary amounts are well within the claimed ranges - e.g. note example 1.

As to claim 31, although the reference does not explicitly describe a kit with containers for each component, the reference does indicate that the rubber crumb is apparently the last material added (e.g. col. 3, lines 40-47; col. 13, lines 40-62) - separate containers for the gel and rubber crumb thus seems implicit or certainly obvious from this disclosure. As to claim 39, the material is clearly present within the tire air cavity. As to claim 40, the material is clearly applied to the tire inner surface and the tire will be driven on a vehicle, it being again noted in particular that the reference even contemplates a flow capability in the tire for the gel composition - this is considered to provide a balance method as claimed.

6. Claims 13-17, 21, 26-29, 39 and 40/13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over GB 2,074,955 to Uniroyal.

GB '955 discloses a composition (layer 18) comprising a gel with solid "roller body particles, e.g. of rubber powder and/or glass or plastics beads" (e.g. note the abstract). Further, the rubber powder and beads are described as having particle sizes within the claimed range - note esp. page 3, lines 19-20 and 85-88. This reference does not explicitly characterize the rubber particles or glass/plastic beads in terms of "an average smallest dimension" - it however would seem reasonable to expect a description of the material as "particles" or especially "beads" would have indicated a relatively uniform material shape and thus the described material size would be

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expected to be very close to the average smallest dimension, particles with an average smallest dimension within the claimed range being therefore considered to have been taught by the reference. Further, even if not considered to have been explicitly taught, the reference suggestion to use particles sizes within the claimed range, along with the apparent suggestion for uniform particle size (esp. in light of a reference to "beads"), would have rendered it obvious to select uniform material and thus a material having average dimensions (both) well within the claimed ranges would have been obvious. The reference to a "tyre balancing composition" is not considered to define over the reference composition as each of the composition requirements (gel/solids) are met and further the material is also clearly tire compatible.

As to claims 14-16, the suggestion to use rubber particles of a certain size and especially the reference to glass or plastic "beads" is considered to reasonably be read as not being directed to a significantly elongated material, particles having ratios less than 2, 1.5 or "around 1" as claimed being therefore considered to have been implicit or obvious from the reference teachings. As to claim 17, note for example the 1.2 mm size endpoint is within the claimed 1-4mm range, the reference therefore teaching or certainly rendering obvious (it being obvious to select any value within the described range) sizes as claimed. As to claim 21, it is submitted that the above noted reference to glass or plastic "beads" would have reasonably been read by the artisan as either suggesting or certainly rendering obvious use of spherical particles. As to claim 26, again rubber and glass (and plastics) are suggested. As to claims 27-29, the exemplary amounts (e.g. page 2, lines 7-10) are well within the claimed ranges. As to claim 39,

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the material is clearly present within the tire air cavity. As to claim 40, the material is clearly applied to the tire inner surface and the tire will be driven on a vehicle, it being considered reasonable to expect a gel material to exhibit some motion and thereby provide some capability of balancing as claimed.

7. Claims 13-16, 21, 26 and 31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gunther (US 4,981,608).

Gunther discloses a gel material that can include rubber particles at a diameter "equal to" 0.8 mm - note esp. col. 5, lines 26+. This is considered to satisfy the claimed composition requirements, it being considered that the description of the particles as having a "diameter" being an indication that the particles are or should be generally symmetrical or spherical, the disclosed diameter being within the claimed range therefore being considered to teach or render obvious the claimed "average smallest dimension". As to claims 14-16, insofar as the particles are described as having a "diameter", this again would suggest generally symmetrical or spherical particles, particles having ratios less than 2, 1.5 or "around 1" as claimed being therefore considered to have been implicit or obvious from the reference teachings. As to claim 21, it is submitted that the above noted reference to a particle "diameter" would have reasonably been read by the artisan as either suggesting or certainly rendering obvious use of spherical particles. As to claim 26, again rubber ("caoutchouc") is suggested. As to claim 31, the reference seems to contemplate separate containers for the gel and "caoutchouc" - note esp. col. 5, lines 21-25 indicate that it is not very convenient to have

separate application - this however would seem to teach or certainly render obvious separate containers if such convenience is not desired.

8. Claims 13-33 and 35-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ronlan (US 5,431,726) taken in view of Powell et al. (US 3,987,833), Clay (US 3,463,551), Fogal (US 5,073,217) and LeBlanc (US 6,128,952).

Ronlan (described in the present specification/examples with reference to its European equivalent) describes a tire balancing composition that meets each of the claimed requirements for the claimed gel material but does not teach inclusion of solid bodies as claimed. Powell et al. is also directed to use of a viscous material to balance a tire and in particular indicates that although the substance can be used alone, "[i]f desired a relatively heavy substance in finely divided particle form may be incorporated in the material so as to augment its weight, thus reducing the volume of material necessary to balance the casing" (col. 2, lines 25-30). Clay is also directed to balancing compositions and in particular suggests a gel composition (e.g. col. 5, lines 60-61) that includes a particulate weighting material. In light of these teachings, to include a particulate weighting material in a gel based balancing composition such as in Ronlan would have been obvious and would have been expected to suitably balance a tire while allowing reduced volumes of material to balance.

As to the size of the particles, neither Powell et al. nor Clay provide specific numeric limitations on the particle sizes to be used. It therefore would have been obvious for the artisan to determine an appropriate size though routine optimization based upon the necessary requirement that the material appropriate balance the tire, it

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further being obvious to look to analogous particle balancing systems that are known to be suitable and effective in this art to provide general guidance in this regard. Fogal is directed to a particulate material to balance a tire and in particular indicates that various particle sizes, including numerous examples well within the claimed range (e.g. Table A) are suitable and effective. LeBlanc provides additional evidence that glass beads, i.e. spherical and including sizes within the claimed range (e.g. col. 5, lines 19-21), are also suitable and effective in balancing. It therefore is again submitted to have been obvious for the artisan to determine an appropriate size through routine optimization based upon the necessary and obvious requirement that the material appropriate balance the tire, values within the claimed range being particularly obvious given that in analogous particle balancing systems, particle sizes within those claimed are known to be suitable and effective in this art.

In light of the suggestion to use particles in general as well as the specific indication in this art that spherical particles are known to be suitable and effective, particles having size ratios less than 2, 1.5 or "around 1" as claimed are considered to have been obvious from the reference teachings. The particular requirements for the gel are taught by Ronlan. Selection of the material properties such as specific gravity and relative amounts of the solid bodies would have been likewise selected through routine optimization for only the expected results. As to the claimed "kit", it is considered to have been an obvious choice for the artisan to either deliver or supply the gel and weighting material either premixed or as separate components, it being considered that the artisan would have understood that the later they are premixed, the

more versatile the system would be insofar as the user would be allowed some flexibility in determining or selecting a weighting material concentration if not premixed. Further and in any event, it is also noted that the present claim seems to read on simply having these components as separate materials at some point in their manufacture, it being certainly obvious or typical to at some point in the manufacture have the materials separate.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

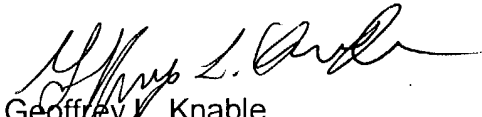
Ronlan (US 4,867,792) is directed to a thixotropic balancing composition that can include fiber and fillers but the described dimensions (smallest dimension for a fiber being the diameter or "thickness" as used in the patent) are orders of magnitude smaller than that claimed - note esp. cols. 5-6.

Tibbals (US 3,747,660) describes a thixotropic tire ballast/sealant that can include sand therein but the particle size would appear to be significantly smaller than that claimed - e.g. table III.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
March 13, 2004